

✓ To

The Jt. Director,
Deptt. of Geology and Mining,
Jammu

No. DGM/G/A/Report/2021/01

Dated 06.07.2021

Subject: Report on New Degree College Dudu Basantgarh, District
Udhampur.

Sir,

Kindly refer your office order No.19/JDJ/Reports/G/2018-19/386-9, dated 08.06.2021 regarding the above cited subject. In this context find enclosed herewith the copy of the report titled "Preliminary Report on New Degree College Dudu Basantgarh, District Udhampur" (in original) for information and further necessary action please.

Yours faithfully,

Encl.: 2 copies in original



Virinder dev
(G/A)

Copy to:

- 1) Officer Incharge Library, deptt. of Geology & Mining for
Record & Information.

Office of the Joint Director, Geology & Mining Department Jammu.

Deputy General Manager
JKPCC Limited, Unit
Udhampur-Reasi

No. DGIM / Jt. Dir. / Report / 2021 / 01

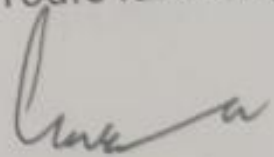
Dated 6.07.2021

Subject: Construction of New Govt. Degree College Dudu Basantgarh.

Sir,

Kindly find enclosed herewith the copy of the report titled "Preliminary Report on New Degree College Dudu Basantgarh, District Udhampur" (in original) in response to your office No. JKPCC/U/R/1011 Dated 08-04-2021. It is pertinent to mention here that the Geotechnical Properties of the rock may be ascertained before execution of the work at the sites proposed for safety of the structure.

Yours faithfully,



Joint Director

Government of Jammu & Kashmir
GEOLOGY AND MINING DEPARTMENT JAMMU

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WORK IS WORSHIP

**Preliminary report on newly identified land for Degree
College Dudu Basantgarh, Tehsil-Ramnagar, District-
Udhampur.**

BY

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Year 2021

Introduction

In continuation to the Joint Director, Geology and Mining Office, Jammu Order No. JDJ/Report/G/2018-19/2066-2069, dated 25/9/2020, the committee constituted vide order No. 19/JDJ/Reports/G/2018-19/386-89, dated 08/06/2021 visited the newly identified site on 09-06-2021 along with the officials from the JKPCCL Ltd. to work out the preliminary site inspection.

Location and Approach

The site is located at village Shivgali of Tehsil Ramnagar in Distt. Udhampur. The area is bounded between the Geo coordinates Lat. $32^{\circ} 51' 0.91''\text{N}$ to Lat. $32^{\circ} 51' 5.27''\text{N}$ and Long. $75^{\circ} 30' 57.60''\text{E}$ to $75^{\circ} 31' 3.70''\text{E}$, and falls in Survey of India Toposheet No. 43 F₁. The area is approachable by mettaled/ unmettaled roads via Jammu – Udhampur National highway up to Udhampur town and from there it is at the distance of about 45kms on Ramnagar-Dudu Road (Location Map of the area)

Topography and Drainage

The area under study represents Mountainous topography characterized by high peaks, deep narrow valleys along with terraces having gentle slope. Tawi and Ujh Rivers are the main sources of drainage in the area confluence by various perennial as well as seasonal rivers and nallas. The area as whole exhibits Dendritic Pattern of drainage in which different orders of streams join like the branches of a tree so as to attain their base level.

Climate

The Climate of Udhampur district varies with altitude. The temperature raises sometimes upto as high as 45°C and seldom goes below 1.5°C at high altitudes area experiences short and pleasant summers. May, June and July are the hottest summer months whereas December, January and February are the coldest months. Winters are cool and chilly characterized by rainfall due to western disturbances. Snowfall is scanty but may occur from December to February. Mostly rainfall occurs during July, August and September by SW Monsoons during Summer and in January and February during winter due to westerly disturbances.

General Geology

Generally, the area comprises of Siwalik & Murree Group of rocks. Lithologically Murree group is comprised of brown to reddish, fine to medium grained Sandstone, Siltstone, Clay stone and Sivalik Group comprises of fine to medium grained Sandstone, Pseudo-conglomerate and reddish pale red Clays. The surrounding areas are occupied by low to medium grade metamorphosed thinly bedded grey Phyllite and Schist generally striking in NW-SE is exposed

	SIVALIKS		clays and mudstone with grey to greenish grey sandstone	
		Kamlhal	Grey greenish grey and purplish sandstone reddish purplish, greyish clay and mudstone and lenticular bands of pseudo conglomerate	Middle Miocene
Murree Group	Upper Murree		Monotonous grey sandstone and grey brown to yellowish subordinate mudstone	Late Miocene
		Baila formation	Graphitic Nodules, gypsious Limestone and Carbonaceous Shale	Proterozoic
		Gamir formation	Purple Shale Quartzite and falaggy Limestone	Proterozoic

Site Geology

Site under inspection is part of the Murree Group and comprises of Purple, brown and buff coarse Sandstone, pseudo-Conglomerates, grayish Shale and deep red to grey colored Clays and belongs to Lower Miocene age. Sandstones as well as Pseudo-Conglomerates at the site are crushed, fragmented, unassorted and unconsolidated.

Observations

The identified site for construction of Degree College Dudu Basantgarh is at a distance of approx. 250-300 mts from the previously acquired land with a total area of 45 Kanal (JKPCC officials). During the preliminary inspection of the site it has been observed that the acquired land is gently sloping and almost flat topped hillock. The rear of this hillock has moderate slope and even steeper at places. A portion of the acquired land (Phase-III site) is separated from the larger half by a small nallah (Fig-1). There is also a dry pond in the nallah as seen in fig-1 below the road.

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having considerable thickness with sporadic occurrence of white crystalline quartzite. The unconsolidated and semi-consolidated sediments of recent to sub-recent origin are also present.

Generalized Regional Geological Sequence of area: Stratigraphic succession modified after Pilgrim (1913) Pasco (1973), Karunakaran and Ranga Rao (1979) and Gupta (1981-82).

North

S I V A L I K S U P E R G R O U P	Group	Formation	Lithology	Age
	Quaternary	Boulder Bed	Alluvium and un-stratified pebbles and boulder	Sub Recent to Recent
	UPPER SIVALIKS	Boulder	Conglomerate and boulders beds	Lower
		Conglomerate	with intercalations of orange to reddish clay, siltstone and sandstone	Pleistocene
		Pinjor	Grey earthy brown sandstone with pink, light brown clay bands, pebble cobble beds and conglomerate bands	Upper Pliocene
	MIDDLE SIVALIKS	Tatrot	Interbedded earthy brown to yellowish brown, maroon clay and siltstone bands brownish to light grey sandstone with pebble beds	
		Dhok Pathan	Inter grey sandstone and variegated clays and pebble beds	Lower Pliocene
		Nagri	Pepper grey sandstone with thin clay bands	
	LOWER	Chinji	Brown red and orange coloured	Upper Miocene

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Fig-1 Overview of the site.



Fig-2 Vertical section along Road cutting.

Erratic boulders of sandstones are found in and around the site which have been rolled down under the influence of gravity on weathering from the higher elevations. Lithologically the site comprises of boulders of sandstones pseudo-conglomerates, grayish shale and deep red to grey colored clays. The vertical section of the site exposed along the road cuttings and under construction building reveals unconsolidated and unsorted boulders of sandstones, mudstones, gravels, pebbles in the heterogeneous matrix of sand and clay of which clay being the dominant matrix (Fig-2). A peculiarity of the Murres i.e. oozing springs is observed along the nallah and at the site near proposed location of (Phase-III) constructions. The spring has turned the land swampy at places (Fig-3). No bedrock is found as the area is covered by the seasonal crops, grasses and trees. Though the land under study has gentle slope towards south and south-east but still some creeping/sinking marks can be seen on both sides of the road which are indicative of reworked and unconsolidated nature of these depositions (Fig-4).

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Fig-1 Showing spring and Swampy land



Fig-4 showing creeping/ Sinking marks

There is also a pond at the top of the hillock at Geo- coordinates Lat. $32^{\circ} 51' 2.91''$ N and Long. $75^{\circ} 30' 57.97''$ E to store the rain water to be used during dry spells for domestic purposes.

Conclusion and Recommendations

On the basis of visual observation recorded it is concluded that the site under inspection is gently sloping hillock with occurrences of springs which have turned the acquired land marshy & swampy at some places. Megascopic examination from the road cut section reveal that the site is composed of unconsolidated sediments mudstones, gravels, pebbles in the heterogeneous matrix of sand and clay of which clay being the dominant in proportions signifying the weak strata & having no exposure of bed rock. Thus, before the execution of the work the following measures are suggested:

1. Diversion of spring/ Rain water by constructing concrete catch drains around the building area.
2. Slope Stability measures should be taken into consideration as the material comprising the hillock is unconsolidated.
3. The foundations & the levels of structures proposed may be decided on the basis of analysis of rock quality designation in consultation with Structural Engineer as per the safe bearing capacities of the material encountered during excavations at the site.

[Signature]

Acknowledgement

The authors are grateful to the Director Geology and Mining Deptt. J&K, Joint Director and Dy. Director (M.I) Geology and Mining Department Jammu for providing us an opportunity to work on the assignment. Authors are grateful to the Jt. Director Geology and Mining Jammu for reviewing the report and much needed guidance. Thanks are also due to the officials from JKPC Division Udhampur for their logistic support and appraisal of the site under discussion.

Reference:

Official website of Udhampur District

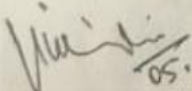
Economic review of Udhampur District 2016-17

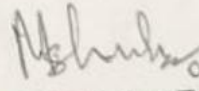
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05.07.2021
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Location Map of Land Identified for Dudu Basantgarh College

Legend

 Pond

 Shivgali Mandir

Newly Identified land

Basantgarh Road

Google Earth

Previously acquired land

1000 ft

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